

CLAIMS

1 1. (currently amended) A method for remotely adjusting a hearing aid of a user, comprising
2 the steps of:
3 generating a command via a first computer at a first location;
4 transmitting the command to a second computer at a second location over a remote data link;
5 sending the command from the second computer to a digital signal processor in the hearing aid as as
6 a DTMF tone;
7 outputting a test tone from the digital signal processor based on the command to a user of a
8 telephone wearing the hearing aid;
9 receiving a user response to the test tone over the remote data link; and
10 adjusting the hearing aid based on the user response to the test tone, wherein:
11 said adjusting step comprises the steps of:
12 transmitting the user response to the first computer over the remote data link;
13 retrieving a stored audiogram from memory based on an accuracy of the
14 response; and
15 uploading the audiogram into the hearing aid of the user over the remote data
16 link; and
17 said audiogram is a compensation curve for adjusting performance characteristics of the
18 hearing aid based on the user response.

1 2. (canceled)

1 3. (previously presented) The method of claim 1, wherein said receiving step comprises
2 inputting a response to the command into the second computer via a keyboard attached to the computer.

1 4. (original) The method of claim 1, wherein said receiving step comprises inputting a
2 response to the command via a key pad on the telephone.

1 5-7. (canceled)

1 8. (currently amended) A method for adjusting a hearing aid of a user, comprising the steps
2 of:
3 generating a command via a computer;
4 sending the command to a digital signal processor in the hearing aid as a DTMF tone;
5 outputting a test tone from the digital signal processor based on the command to the user of a
6 telephone wearing the hearing aid;
7 receiving a response to the test tone by the user;
8 storing the response to the test tone by the user in the computer;
9 retrieving a stored audiogram from memory based on an accuracy of the stored response; and
10 uploading the audiogram into the hearing aid of the user.

1 9. (canceled)

1 10. (previously presented) The method of claim 8, wherein said receiving step comprises
2 inputting a response to the command into the computer via a keyboard attached to the computer.

1 11. (original) The method of claim 8, wherein said receiving step comprises inputting a
2 response to the command via a keypad on the telephone.

1 12. (canceled)

1 13. (previously presented) The method of claim 8, wherein said audiogram is a
2 compensation curve for adjusting performance characteristics of the hearing aid based on the user
3 response.

1 14. (original) The method of claim 8, wherein the command is generated by a first computer
2 at a first location and is received by a second computer at a second location, and said second computer
3 sends the command to the digital processor.

1 15-17. (canceled)

1 18. (previously presented) The method of claim 8, wherein the step of sending the command
2 to the digital signal processor is by a wireless link.

1 19. (currently amended) A method for remotely adjusting a hearing aid of a user, comprising
2 the steps of:

3 generating a command via a first computer at a first location;
4 transmitting the command to a second computer at a second location over a remote data link;
5 sending the command from the second computer to a digital signal processor in the hearing aid as
6 a DTMF tone;
7 outputting a test tone from the digital signal processor based on the command to a user of a
8 telephone wearing the hearing aid;
9 receiving a user response to the test tone over the remote data link; and
10 adjusting the hearing aid based on the user response to the test tone, wherein said receiving step
11 comprises inputting a response to the command into the second computer via a keyboard attached to the
12 computer.

1 20. (currently amended) A method for remotely adjusting a hearing aid of a user, comprising
2 the steps of:

3 generating a command via a first computer at a first location;
4 transmitting the command to a second computer at a second location over a remote data link;
5 sending the command from the second computer to a digital signal processor in the hearing aid as
6 a DTMF tone;
7 outputting a test tone from the digital signal processor based on the command to a user of a
8 telephone wearing the hearing aid;
9 receiving a user response to the test tone over the remote data link; and
10 adjusting the hearing aid based on the user response to the test tone, wherein said adjusting step
11 comprises the steps of:
12 transmitting the user response to the first computer over the remote data link;
13 determining an accuracy of the user response;
14 retrieving a stored audiogram from memory based on the accuracy of the response; and
15 uploading the stored audiogram into the hearing aid of the user over the remote data link.

1 21. (currently amended) A method for adjusting a hearing aid of a user, comprising the steps
2 of:

3 generating a command via a computer;
4 sending the command to a digital signal processor in the hearing aid as a DTMF tone;
5 outputting a test tone from the digital signal processor based on the command to the user of a
6 telephone wearing the hearing aid;

7 receiving a response to the test tone by the user; and
8 storing the response to the test tone by the user in the computer, wherein said receiving step
9 comprises inputting a response to the command into the computer via a keyboard attached to the
10 computer.

1 22. (currently amended) A method for adjusting a hearing aid of a user, comprising the steps
2 of:
3 generating a command via a computer;
4 sending the command to a digital signal processor in the hearing aid as a DTMF tone;
5 outputting a test tone from the digital signal processor based on the command to the user of a
6 telephone wearing the hearing aid;
7 receiving a response to the test tone by the user; and
8 storing the response to the test tone by the user in the computer, wherein the command is
9 generated by a first computer at a first location and is received by a second computer at a second
10 location, and said second computer sends the command to the digital processor.

1 23-66. (canceled)

1 67. (new) A method for remotely performing a hearing test on a user of a hearing aid via a
2 telephone system, the method comprising:
3 transmitting a command from a remote computer over the telephone system to a telephone of the
4 user;
5 rendering the command, by the telephone, as a sound signal;
6 receiving the sound signal at the hearing aid;
7 generating a test signal, by a signal processor in the hearing aid, based on the sound signal;
8 generating a test tone, by the hearing aid, based on the test signal;
9 transmitting a user response to the test tone to the remote computer; and
10 generating, by the remote computer, hearing test results for the user of the hearing aid based on
11 the user response.

1 68. (new) The method of claim 67, wherein:
2 the command is a DTMF signal;
3 the sound signal is a DTMF tone;
4 the test signal is different from the DTMF signal; and
5 the test tone is different from the DTMF tone.

1 69. (new) The method of claim 67, further comprising:
2 generating adjustments, at the remote computer, for the hearing aid based on the hearing test
3 results; and
4 transmitting the adjustments from the remote computer to the hearing aid to adjust operations of
5 the hearing aid.

1 70. (new) The method of claim 69, wherein:
2 generating the adjustments comprises retrieving an audiogram from memory at the remote
3 computer based on the hearing test results; and
4 transmitting the audiogram to the hearing aid.

1 71. (new) The method of claim 69, wherein:
2 the adjustments are transmitted from the remote computer to the telephone via the telephone
3 system; and

4 the adjustments are transmitted from the telephone to the hearing aid as sound signals.

1 72. (new) The method of claim 71, wherein:
2 the adjustments are DTMF signals; and
3 the sound signals corresponding to the adjustments are DTMF tones.

1 73. (new) The method of claim 67, wherein the user response is entered by the user using a
2 key pad on the telephone and transmitted to the remote computer via the telephone system.

1 74. (new) The method of claim 67, wherein the user response is entered by the user into a
2 local computer and transmitted from the local computer to the remote computer.

1 75. (new) The method of claim 67, wherein the signal processor is a digital signal processor.

1 76. (new) A hearing aid, comprising a signal processor, adapted to support remote
2 performance of a hearing test on a user of the hearing aid via a telephone system, wherein:
3 the hearing aid is adapted to receive a sound signal from a telephone, the sound signal
4 corresponding to a command transmitted from a remote computer over the telephone system to the
5 telephone of the user, wherein the telephone rendered the command as the sound signal;
6 the signal processor is adapted to generate a test signal based on the sound signal;
7 the hearing aid is adapted to generate a test tone based on the test signal, wherein a user response
8 to the test tone is transmitted to the remote computer, which generates hearing test results for the user of
9 the hearing aid based on the user response.

1 77. (new) The hearing aid of claim 76, wherein:
2 the command is a DTMF signal;
3 the sound signal is a DTMF tone;
4 the test signal is different from the DTMF signal; and
5 the test tone is different from the DTMF tone.

1 78. (new) The hearing aid of claim 76, wherein the hearing aid is adapted to receive
2 adjustments generated at the remote computer based on the hearing test results, wherein the adjustments
3 adjust operations of the hearing aid.

1 79. (new) The hearing aid of claim 78, wherein the adjustments comprise an audiogram
2 retrieved from memory at the remote computer based on the hearing test results and transmitted to the
3 hearing aid.

1 80. (new) The hearing aid of claim 78, wherein:
2 the adjustments are transmitted from the remote computer to the telephone via the telephone
3 system; and
4 the adjustments are transmitted from the telephone to the hearing aid as sound signals.

1 81. (new) The hearing aid of claim 80, wherein:
2 the adjustments are DTMF signals; and
3 the sound signals corresponding to the adjustments are DTMF tones.

1 82. (new) The hearing aid of claim 76, wherein the user response is entered by the user
2 using a key pad on the telephone and transmitted to the remote computer via the telephone system.

1 83. (new) The hearing aid of claim 76, wherein the user response is entered by the user into
2 a local computer and transmitted from the local computer to the remote computer.

1 84. (new) The hearing aid of claim 76, wherein the signal processor is a digital signal
2 processor.

1 85. (new) A remote computer adapted to support remote performance of a hearing test on a
2 user of a hearing aid via a telephone system, wherein the remote computer is adapted to:
3 transmit a command over the telephone system to a telephone of the user, wherein:
4 the telephone renders the command as a sound signal;
5 the hearing aid receives the sound signal;
6 a signal processor in the hearing aid generates a test signal based on the sound signal;
7 the hearing aid generates a test tone based on the test signal;
8 receive a user response to the test tone; and
9 generate hearing test results for the user of the hearing aid based on the user response.

1 86. (new) The remote computer of claim 85, wherein:
2 the command is a DTMF signal;
3 the sound signal is a DTMF tone;
4 the test signal is different from the DTMF signal; and
5 the test tone is different from the DTMF tone.

1 87. (new) The remote computer of claim 85, wherein the remote computer is adapted to:
2 generate adjustments based on the hearing test results; and
3 transmit the adjustments to the hearing aid, wherein the adjustments adjust operations of the
4 hearing aid.

1 88. (new) The remote computer of claim 87, wherein the adjustments comprise an
2 audiogram retrieved from memory at the remote computer based on the hearing test results and
3 transmitted to the hearing aid.

1 89. (new) The remote computer of claim 87, wherein:
2 the remote computer is adapted to transmit the adjustments to the telephone via the telephone
3 system; and
4 the adjustments are transmitted from the telephone to the hearing aid as sound signals.

1 90. (new) The remote computer of claim 89, wherein:
2 the adjustments are DTMF signals; and
3 the sound signals corresponding to the adjustments are DTMF tones.

1 91. (new) The remote computer of claim 85, wherein:
2 the user response is entered by the user using a key pad on the telephone; and
3 the remote computer is adapted to receive the user response via the telephone system.

1 92. (new) The remote computer of claim 85, wherein:
2 the user response is entered by the user into a local computer; and
3 the remote computer is adapted to receive the user response from the local computer.

1 93. (new) The remote computer of claim 85, wherein the signal processor is a digital signal
2 processor.

1 94. (new) A system for remotely performing a hearing test on a user of a hearing aid via a
2 telephone system, the system comprising the hearing aid and a remote computer, wherein:
3 the remote computer is adapted to transmit a command over the telephone system to a telephone
4 of the user, wherein the telephone renders the command as a sound signal;
5 the hearing aid is adapted to receive the sound signal;
6 a signal processor in the hearing aid is adapted to generate a test signal based on the sound
7 signal;
8 the hearing aid is adapted to generate a test tone based on the test signal;
9 the remote computer is adapted to receive a user response to the test tone; and
10 the remote computer is adapted to generate hearing test results for the user of the hearing aid
11 based on the user response.

1 95. (new) The system of claim 94, wherein:
2 the command is a DTMF signal;
3 the sound signal is a DTMF tone;
4 the test signal is different from the DTMF signal; and
5 the test tone is different from the DTMF tone.

1 96. (new) The system of claim 94, wherein:
2 the remote computer is adapted to generate adjustments for the hearing aid based on the hearing
3 test results; and
4 the remote computer is adapted to transmit the adjustments to the hearing aid to adjust operations
5 of the hearing aid.

1 97. (new) The system of claim 96, wherein the remote computer is adapted to:
2 generate the adjustments by retrieving an audiogram from memory at the remote computer based
3 on the hearing test results; and
4 transmit the audiogram to the hearing aid.

1 98. (new) The system of claim 96, wherein:
2 the remote computer is adapted to transmit the adjustments to the telephone via the telephone
3 system; and
4 the adjustments are transmitted from the telephone to the hearing aid as sound signals.

1 99. (new) The system of claim 98, wherein:
2 the adjustments are DTMF signals; and
3 the sound signals corresponding to the adjustments are DTMF tones.

1 100. (new) The system of claim 94, wherein:
2 the user response is entered by the user using a key pad on the telephone; and
3 the remote computer is adapted to receive the user response via the telephone system.

1 101. (new) The system of claim 94, wherein:
2 the user response is entered by the user into a local computer; and
3 the remote computer is adapted to receive the user response from the local computer.

1 102. (new) The system of claim 94, wherein the signal processor is a digital signal processor.